	The Maryland Healthcare Commission Health Information Organization Research Arizona - AMIE HIO February , 2009		
Section	**Requirement**	**Definitions**	**Arizona / AMIE**
Vision	**Vision**	Clear description of how to respond the unique needs an opportunities of HIE in state	
	Mission		
	Principles from Appendix B		
	Interoperability		
	Quality of care		
Strategy and Planning			
	Financial Model and Sustainability	Economic Analysis of cost and benefit for each phase of implementation	
	Financially sustainable		
	Transaction fees		
	Subscription fees		
	Membership fees		
	Hospital funding		
	State Funding		
	Federal Funding		Amie was completely funded by the Medicaid Transformation Grant
	Health Plan funding		
	Physician funding		
	Philanthropic funding		
	Budget		A project budget was prepared and is reviewed monthly
	capital		Capital expenditures were budgeted and reviewed monthly

	operating costs		All operating costs were budgeted and reviewed monthly, adjusted as needed
	Salaries		
	Benefits		
	Office expense		
	Rent		
	Utilities		
	Software purchase and maintenance		
	Hardware purchase and maintenance		
	Taxes		
	Cyber Liability Insurance		
	cash flow		
	break even analysis		This is in process as they are trying to security more funding to continue the pilot
	Community Benefit		Community Benefit is documented
Benefit Realization			
	ROI - financial measurement		
	ROI - quality measurement		
	ROI - System use measurement		Measurements are being provided by number of users, type of data accessed, as well as help desk requests.
	how many users		Measurements are being provided by number of users
	what do they access		Measurements are being provided by type of data access
	Governance Framework	A multi-stakeholder approach that represents the needs of the community and all stakeholders	

	Plan for engaging stakeholders		
	Ownership model: Public-Private Partnership		The AMIE HIO is managed and governed by the Arizona Health Care Cost Containment System (AHCCCS)
	Profit Status: Not-for-profit		AMIE is a government entity
	Articles of Governance		
	Role of Local HIEs:		
	May include but not require creation of independent governance entities to oversee regional or local HIE. All HIEs would conform with statewide policies, standards and rules.		AMIE is beginning outreach to a Rural Mental Health Facility that is in the process of forming a HIO
	RHIO participation will be required (required as regional governance entities)		
	Local HIEs must be inclusive and non-discriminatory		
	Technical Operations		
	Separate governing structure from technical operations (potential for combination in latter stages)		
	Governance and technical operations in single entity		
	Accountability Mechanisms		
	Direct oversight through contracts with incentives for adherence and penalties for non-adherence		
	Direct oversight via legislation		
	Board of Director Composition		
	Governor's Office		
	State Medicaid Agencies		

	State Department of Health	
	State Healthcare and Hospital Association	
	State Medical Association	
	Other non-profits who are involved in the medical community	
	Government Agencies who may be a stakeholder	
	Consumers	
	Employers	
	Insurers	
	Health Care Providers	
	Pharmacy	
	Clinical Laboratories	
	Higher Education	
	Quality Organizations	
	Operational / Management Positions and Responsibilities	
	Positions	AMIE is staffed by a Project Director, Medical Director, several analysts and developers
	Executive Director	
	Staff	
	2 program staff, controller, 2 adm assistants	
	Privacy and Security Officer	
	Responsibilities	
	Execute strategic, business and technical plans	
	Coordinate day-to-day tasks and deliverables	

	Establish contracts and other relationships with local/sectoral initiatives		
	Provide industry knowledge		
	Advise the Board		
	Board Committees and Responsibilities		
	Governance Board		
	Maintain vision, strategy, and outcome metrics		
	Build trust, buy-in and participation of major stakeholders statewide		
	Assure equitable and ethical approaches		
	Develop high-level business and technical plans		
	Approve statewide policies, standards, agreements		
	Balance interests and resolve disputes		
	Raise, receive, manage and distribute state, federal, private funds		
	Prioritize and foster interoperability for statewide and sub-state initiatives		
	Implement statewide projects and facilitate local/sector projects		
	Identify and overcome obstacles		

	Financial and legal accountability, compliance, risk management		
	Educate and market		
	Facilitate consumer input (Others in MCHIE document worth reviewing and making sure tie back to above)		
	Determining compensation for staff		
	Board Committees		
	Broadens stakeholder representation in governance body		
	Provides content expertise in very specific areas		
	Represents clinicians, consumers, employers and payers		
	Suggested Committees:		
	Steering Committee		
	Privacy and Security (legal, S & P officers)		
	Clinical		
	Technical		
	Standards		
	Outreach and Education		
	Privacy and Security		
	Registration		
	Registration authority		
	Trusted relationship (i.e. hospital)		AMIE has established a trusted relationship with the Hospitals that are providing the data
	Authentication –		

	providers		AMIE requires a strong password with questions as a means to authentication providers.
	consumers		
	public health		
	other institutions (educational)		
	non licensed providers (if any exist in state)		
	data authentication (in and out of HIO)		AMIE authenticates the data being provided to the system, not for accuracy but to verify whose data it is by matching patient data.
	system authentication (system accessing HIO)		AMIE performs system authentication to monitor which systems from what location are providing data
	Identification -		
	Use of a master person index to provide provider and consumer information		AMIE has a listing of Medicaid providers and they receive a list of providers authorized by the partner Hospitals for matching.
	public health		
	other institutions (educational)		
	non licensed providers (if any exist in state)		
	data identification		
	system identification		System identification is performed via IP address
	Credentialing of health care providers		Credentialing is provided through the trusted relationship with the hospitals
	Audit – providers, consumers, data		
	what is audited		Provider and System is audited

	who audits		AMIE has strong audit procedures
	how often		Reports are reviewed weekly
	external audit requirements		
	rules of enforcement		AMIE is working in conjunction with the Arizona Health-e Connection to define enforcement
	Authorization – providers, consumers, data		
	providers authorized to see what data		Providers are authorized via the trusted relationship with the hospital
	consumers authorized		
	public health		
	other institutions (educational)		
	non licensed providers (if any exist in state)		
	data authorization		Data is a push from the data partners
	system authorization		Systems are authorized by HIO and data partners
	Access – role based using HL7 standards		
	Who can access what data		Providers are authorized to see all data except sensitive protected health
	Who can change, update data		
	Sensitive specially protected health information - substance abuse, HIV/AIDS, genetic etc.		Sensitive specially protected health information is suppressed at the HIO
	Consent Framework		
	Opt In	*if patient opts out does the data still go to the HIO without allowing it to be viewed, changed etc.	

	Opt Out	Recommend reviewing California consent models - very detailed based on use cases	
	Notice only to consumer that their information in accessible via HIO		Arizona is a no consent state; AMIE has not acted on the consent issue, however the data partners made the choice to notify patients that their information would be in the HIO
Use of de-identified data			
Legal Agreements:			
	master participation agreement		A very detailed master participation was executed with each data partner
	use agreement		A use agreement was executed with each data partner
	business associate agreements		A business associate agreement was executed with each provider that the data partner authorized.
	Policy and Procedures	Develop sound policy to manage authorization and access to electronic patient information in a consumer centric approach to health information exchange (Privacy and Security Policies)	
	authentication		Policy and Procedures are place and followed
	audit		Policy and Procedures are place and followed
	authorization		Policy and Procedures are place and followed
	access		Policy and Procedures are place and followed
	consent		

	enforcement - statewide that all must adhere to and may require legislation or ownership by AG office		in process
	Break the glass		
	Form relevant policy to enable improved community health status		
	HRB		
	Support for Policies Governing Patient Authorization for Data Sharing		
	Legal Issues		
	HIPAA considerations		HIPAA rules were followed as policy and agreements were developed
	MDCMRA as may be required		
	Stakeholder Outreach and Education	Ensure Transparency, convene all stakeholders, educate	
	Part of statewide governing body		
	Documented process to educate:		
	Consumers		
	Under-served		
	Providers		Provider outreach includes a user group who reviews; prior to system launch focus groups were conducted with the providers who were participating in the pilot
	Public Health		
	Government Agencies		
	Non-profits		

	Understanding of market forces - patterns of care , who to connect with and political environment		
Detail Design	Care Delivery	Implementation Sequencing – Who has access first and Implementation Phasing - What information is available first	
	Phase 1:		
	Data Partners		
	Hospitals		Three major hospitals provide data to AMIE
	Laboratories		One major lab is providing data to AMIE
	Clinics		
	Pharmacies		AMIE has contracted with a firm to have them accumulate the medication history and provide to them
	Individual Physician Practice		
	Nursing Homes		
	State Health Agencies		
	Quality Organization		
	Medicare		
	Medicaid		
	Insurers		
	Data Exchange Requirements		
	Use case analysis to determine actors, information they need, how to provide:		
	Clinical Decision Support Tools		
	Medication history and reconciliation		AMIE is providing medication history
	outpatient prescriptions		Provided

	pharmacy prescriptions		Provided	
	e-prescribing and prescription histories			
	Allergy and drug-drug interaction alerts			
	Access to drug formularies for Medicaid and MD's two top private insurers			
	Lab results		Provided by one major lab	
	outpatient lab results		Provided by one major lab	
	Outpatient episodes			
	Radiology Results			
	Radiology images			
	Inpatient episodes			
	Dictation / transcription			
	Claims			
	Pathology			
	enrollment / eligibility			
	Cardiology			
	GI			
	Pulmonary			
	Hospital discharge summary		Provided by the Hospital partners	
	Emergency room reports			
	Patient Reported Data			
	Ambulatory electronic health record			
	Disease Management Tools			
	Wellness and prevention support based on national proactive guidelines - disease management			
	Medical Alerts			
	Demographics			

	Application Functionality		
	Evaluate the following applications based on use case analysis:		
	clinical messaging		
	Continuity of care records (CCD)		
	Longitudinal health records		
	Elements of Shared Health Record		
	Insurance Eligibility		
	Functionality to Support Access to Data for Research		
	Support for External Information Requests		
	Master person index		
	Record Locator Service		A record locator service is in place using MASS Share open source
	Health Record Banking		
	Auditing		Auditing software was custom
	Security Applications		Security applications are custom
System Architecture			
	Plan for interfaces of data from data providers		Interfaces were written for all the data partners to send information to the HIO
	Push / Pull		Push model is in place
	Central Repository vs. Federated Model		
	Record Locator - Edge Servers		Edge servers are installed at the data partner location but maintained by the AMIE staff
	Hybrid Model		
	MPI		
	HRB with opt-in		

	Web-based application (portal)		This is a web based application
	Reporting		
	Standards		
	Standards for Message and Document Formats (HL7)		HL7 is being used
	Standards for Clinical Terminology		Standards for clinical terminology is in use
	Provide and implement CCHIT certified EMRs for selected physicians as determined by XXXXX with options including: EMR license with physician storing in office; license with storage at hospital or health bank; license with storage at vendor; ASP model		
	HITSP-endorsed IHE approach appropriate for supporting distributed data or HRB		HITPS used where applicable
	ASTM Standards		
	NIST e-authentication		NIST e-authentication standards considered
	IHE		
Implementation	Project Management		All PM functions are in place
	Team Selection		All PM functions are in place
	Detail Schedule		All PM functions are in place
	Task development		All PM functions are in place
	Hardware infrastructure		All PM functions are in place
	Software Solution Deployment		All PM functions are in place
	Interface analysis		All PM functions are in place
	Interface Development		All PM functions are in place
	Agreement negotiation		All PM functions are in place
	Solution Testing		All PM functions are in place

Maintenance	Operations processes		All PM functions are in place
	Staffing		All PM functions are in place
	Support Services		All PM functions are in place